Forest and Wildlife Benefits on Private Land

4

Snags and Den Trees

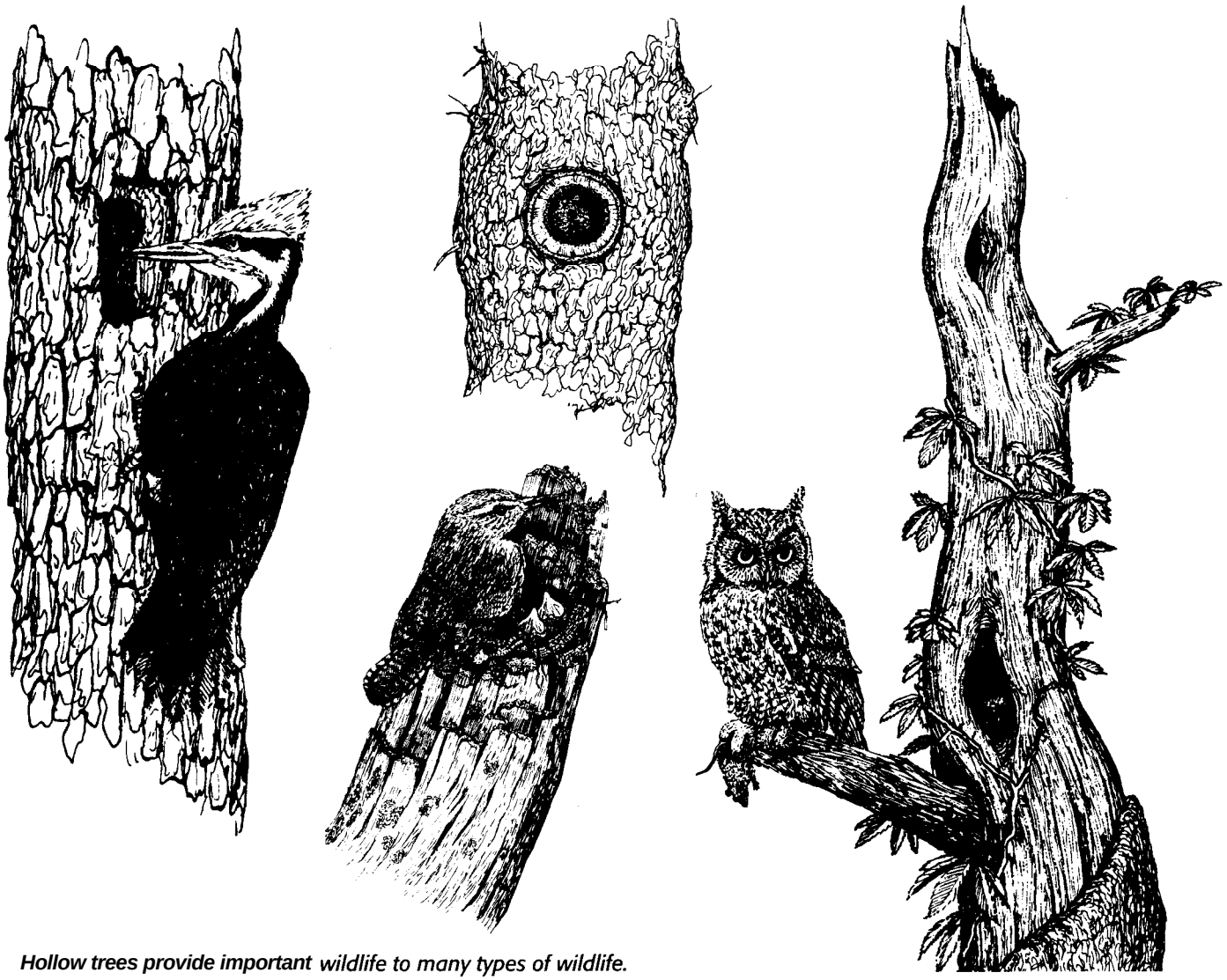
Both snag trees and den trees provide essential food and cover for many species of wildlife. Snags are standing dead trees, and den trees are alive with a cavity in the trunk or limbs.

In Missouri, snags, den trees and fallen trees provide essential habitat for about a third of our wildlife populations. Eighty-nine wildlife species require snags and den trees for nesting, food and shelter. An additional 66 species depend on fallen woody material such as rotting logs, limbs, and brushpiles.

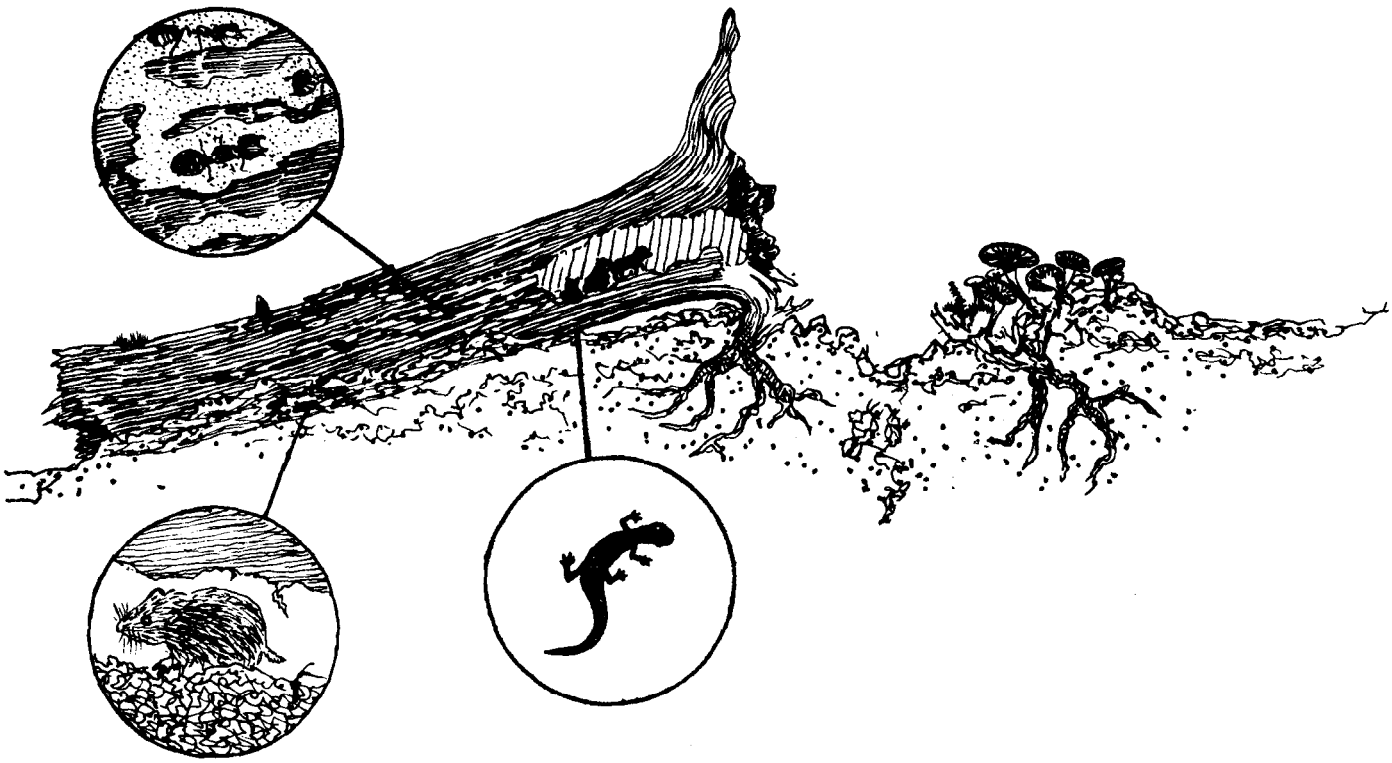
Snags

Once a tree dies, the slow process of decay begins. While decaying, birds use snags for perching, feeding and nesting. As the center of the snag softens, birds such as woodpeckers busily hollow out their own nest holes, which are later used by chickadees, kestrels and screech owls.

Not too long ago, foresters would remove all snags because of the potential for insects and disease. Now, we know many birds eat insects off snags which helps



Hollow trees provide important wildlife to many types of wildlife.



Fallen logs also have their place in providing wildlife habitat.

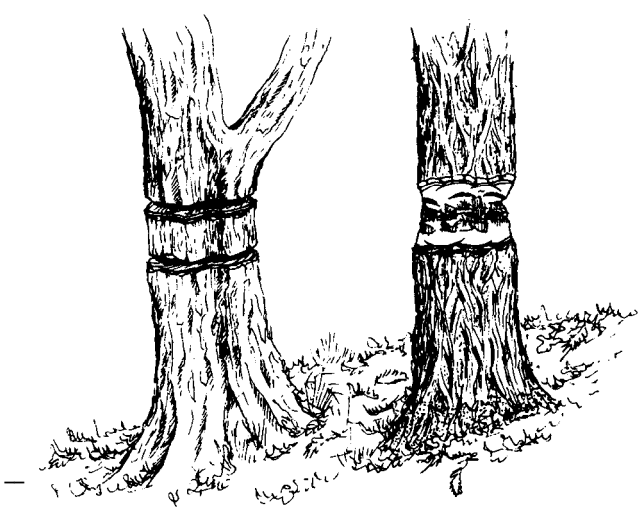
prevent serious insect and disease problems in other trees. Large fallen trees can provide important habitat for grouse, chipmunks, salamanders and frogs for up to 50 years.

Any dead tree will be used by wildlife regardless of how many trees are present. Woodland management for wildlife should consider the following **minimum** recommendations:

1. Leave or establish (per acre):
   - ► One snag larger than 20 inches dbh (diameter at breast height). Snags of this size will be used by birds such as pileated and red-headed woodpeckers.
   - ► Four snags between 10" and 20" dbh for species such as the southern flying squirrel and the American kestrel.
   - ► Two snags between 6" and 10" dbh for such species as the eastern bluebird and black-capped chickadee.

2. If more snags are needed, deaden live trees by cutting a 3" to 4" wide band around the tree with an axe or by making two cuts around the tree with a chainsaw.

3. Trees should not be deadened to create snags in areas of limited forest habitat such as along streams, fence rows, narrow drainages, or small isolated woodlots.



***Girdling can create snags** where they are in short supply.*

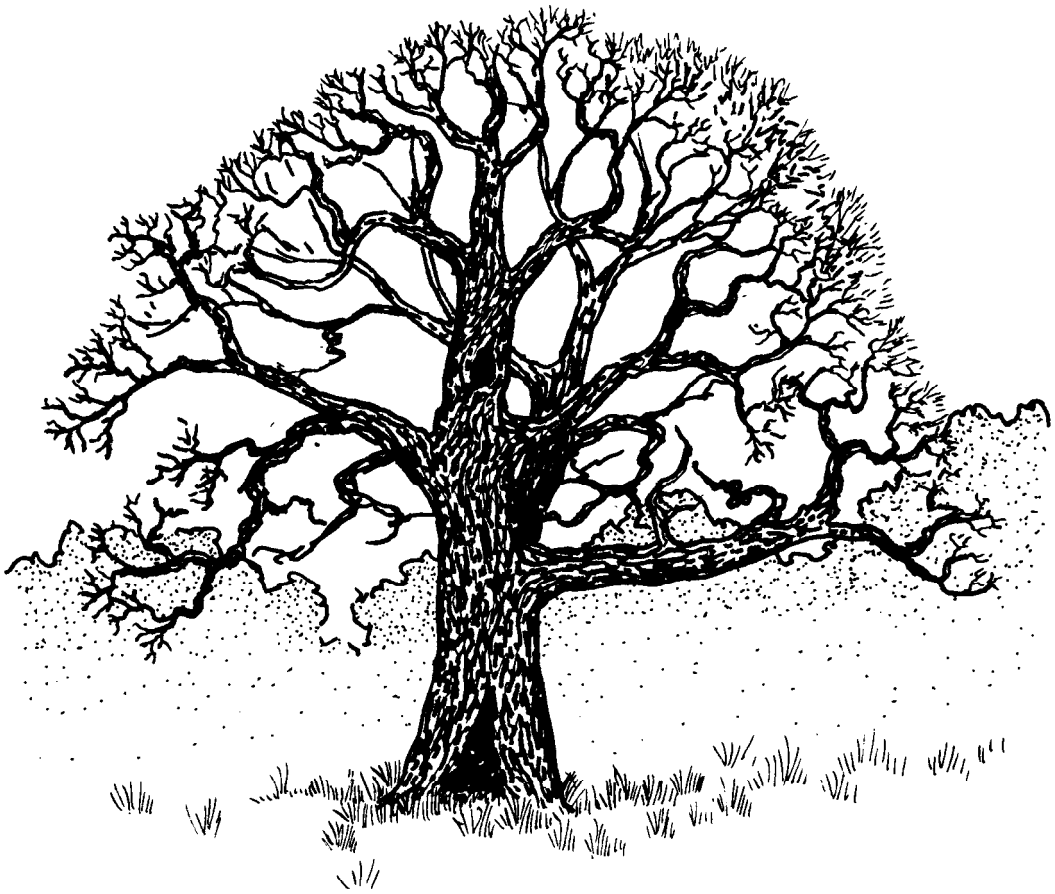
Den Trees

Many birds, mammals, and reptiles use tree cavities throughout the year for nesting, cover and protection from the weather. Without enough den trees, the number and diversity of wildlife will be less.

Typical woodlots usually do not have enough cavities for wildlife habitat, so it is very important to protect the existing or potential den trees. Wolf trees--old, open-grown, large-crowned trees--are potential den trees that are doubly valuable because they also produce food.

Future den trees will show signs of rot, such as decayed branches, fungi, or wounds and scars. Woodpecker activity is also a sign of disease or insect infestation. Good places for den trees are along streams and fence rows, and near small isolated woodlots. Not all old, damaged trees make good den trees, however. For example, hollow trees broken off at the top offer little protection from rain and snow.

White oak, post oak and other kinds of oak make the best den trees because they are long-lived. Other species such as hickory, American elm, sugar maple, American sycamore, eastern cottonwood, blackgum, ash and basswood also make excellent den trees.



Wolf trees have large spreading branches.

Woodland management for wildlife should consider the following **minimum** recommendations:

1. Leave or establish (per acre):

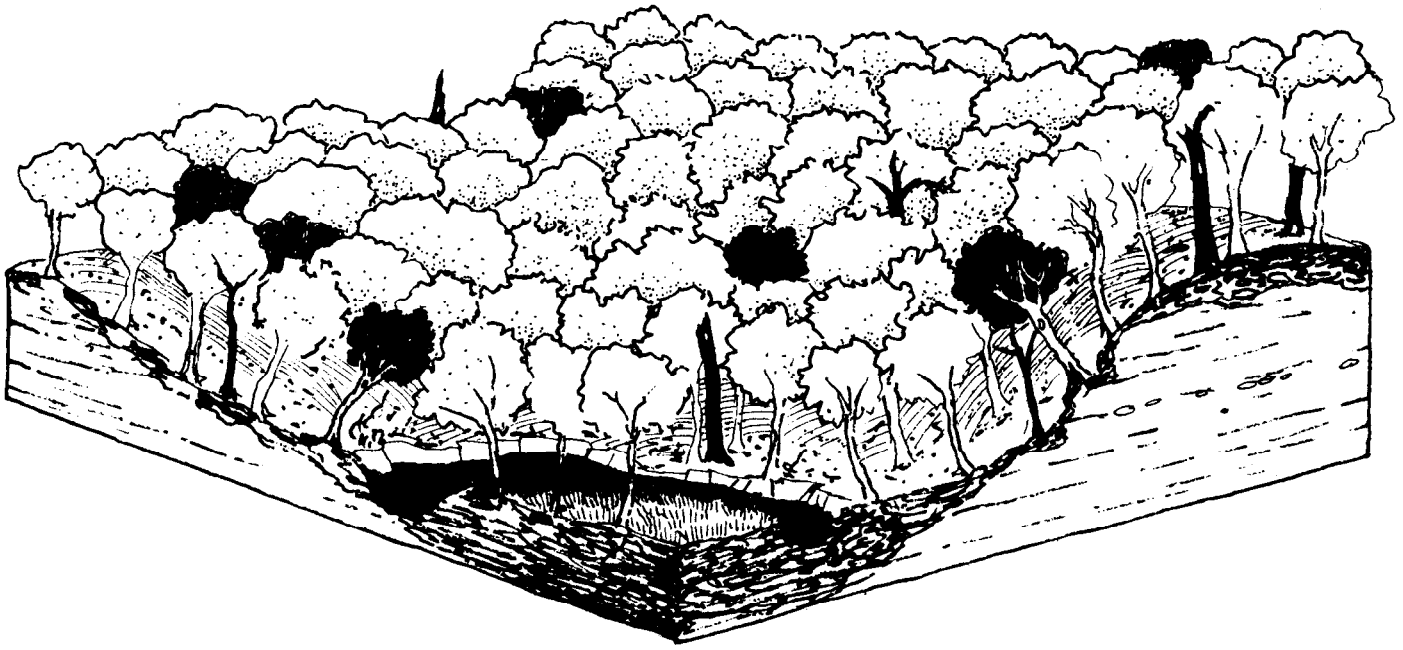
- ► One den tree larger than 20" dbh (diameter at breast height). Den trees this size are good for barred owls, fox squirrels and raccoons.
- ► Four den trees between 10" and 20" dbh for gray squirrels and red-breasted nut hatches.
- ► Two den trees between 6" and 10" dbh for tufted titmice and house wrens.

2. Do not harvest den trees in regeneration cuts. Leave them standing or deaden by girdling with an axe or chainsaw. The resulting snag will form a cavity that will continue to provide wildlife benefits for up to 10 years.

3. When no den trees exist, future den trees can be created by wounding selected trees. Open wounds allow fungal disease into the tree to begin the decay process. There are several ways to do this, but a cavity may take years to develop:

a. Cut a limb (the larger the better) about 6 inches from the trunk of the tree. Ash, elm, cottonwood, sycamore, silver maple, and basswood are good trees for this method.
b. Chop out a 6"x 6" section of bark on the trunk of a suitable tree, preferably one that shows signs of damage or decay. Select trees about 100 feet apart.
c. Drill a hole at least 2" across and 3" deep into the trunk of a suitable tree. It's best to make the hole under a limb that is 3" or more in diameter.
d. For quicker results, put some bird houses and den boxes on the trees.

For free technical advice contact the Missouri Department of Conservation forester in your area.



Seven den trees per acre are desirable.